ABSTRACT

[Summary]

This invention provides a high purity silica crucible having low impurity concentration in its inner portion, and its production method. The crucible, in which at least each content of Na and Li being contained in the depth of 1 mm from the inside surface is less than 0.05 ppm, is given by a production method of a high purity silica glass crucible, wherein a purity of the melted silica powder layer is increased by applying a voltage between a mold and an arc electrode to move impurity metals being contained in the melted silica glass layer to the outside, when the silica crucible is produced by arc plasma heating a raw material powder of silica in an inside surface of a hollow rotary mold. The method comprises, keeping an arc electrode potential of within ± 500 V during an arc melting, applying a voltage of from –1000 V to –20000 V to a mold being insulated to the ground, and applying a high voltage to the un-melted silica powder layer of the outside.